

Name:

Date:

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**PART A** In the space on the left, write the letter of the term or phrase which **best** completes the statement or answers the question (1 mark each).

- \_\_\_\_ 1. The transfer of heat within a fluid is known as ...  
a. Convection  
b. Conduction  
c. Thermocline  
d. Asthenosphere
- \_\_\_\_ 2. Which of the following describes the amount of radiation that is reflected by a surface?  
a. Subduction  
b. Magnitude  
c. Albedo  
d. Humidity
- \_\_\_\_ 3. The closest layer of the atmosphere to the Earth's surface is the ...  
a. Thermosphere  
b. Asthenosphere  
c. Lithosphere  
d. Troposphere
- \_\_\_\_ 4. Which of the following is a carbon source?  
a. The ocean  
b. Fossil fuels  
c. Forests  
d. Soil
- \_\_\_\_ 5. High-pressure systems typically bring ...  
a. Rain  
b. Snow  
c. Clear skies  
d. Extreme weather
- \_\_\_\_ 6. One tectonic plate pushing below another is known as ...  
a. Subduction  
b. Convergence  
c. Convection  
d. Conduction

- \_\_\_ 7. A typical La Niña year brings ...  
a. Snowier winters in Canada  
b. Fewer hurricanes  
c. Normal weather  
d. Warmer winters in Canada
- \_\_\_ 8. Chlorofluorocarbons break apart ...  
a. Carbon dioxide  
b. Nitrous oxide  
c. Ozone  
d. Methane
- \_\_\_ 9. Seafloor spreading occurs due to ...  
a. Increased methane in the atmosphere  
b. Convection currents in the upper mantle  
c. A depletion of the ozone layer  
d. Magnetic reversal
- \_\_\_ 10. What of the following helps in keeping tectonic plates in motion?  
a. Slab pull  
b. Prevailing winds  
c. The greenhouse effect  
d. Magnetic reversal
- \_\_\_ 11. Cattle farming leads to increases in which greenhouse gas?  
a. Nitrous oxide  
b. Ozone  
c. CFCs  
d. Methane
- \_\_\_ 12. Heat transferring by direct particle contact is known as ...  
a. Convection  
b. Ultraviolet radiation  
c. Conduction  
d. Subduction
- \_\_\_ 13. The location inside the Earth where an earthquake starts is known as the ...  
a. Epicentre  
b. Dewpoint  
c. Fault  
d. Focus
- \_\_\_ 14. Which of the following is **NOT** a greenhouse gas?  
a. Carbon dioxide  
b. Ozone  
c. Water vapour  
d. Nitrogen

- \_\_\_ 15. Isobars connect locations of ...  
a. Equal pressure  
b. Equal temperature  
c. Equal concentration  
d. Equal volume

**PART B** In the space provided mark each of the following as true or false. (1 mark each)

- \_\_\_ 1. Sea breezes typically occur during the daytime.
- \_\_\_ 2. Deforestation increases the surface's albedo.
- \_\_\_ 3. Water vapour is the most abundant greenhouse gas in the Earth's atmosphere.
- \_\_\_ 4. The Earth's outer core is liquid.
- \_\_\_ 5. The Hawaiian Islands were created as a result of magnetic striping.
- \_\_\_ 6. The first wave to arrive after an earthquake are S-waves.
- \_\_\_ 7. The Epicentre is the point on the surface above where an earthquake originated.
- \_\_\_ 8. Radiation is the only mechanism which transfers thermal energy in the absence of matter.
- \_\_\_ 9. A typical El Niño year brings colder winters to Canada.
- \_\_\_ 10. The Coriolis effect is change in the direction of moving air and water due to the Earth's rotation.
- \_\_\_ 11. Scientists use barometers to measure the strength of an earthquake.
- \_\_\_ 12. All most all the water vapour in the atmosphere exists in the lithosphere.
- \_\_\_ 13. Convection occurs in fluids.
- \_\_\_ 14. The Hawaiian Islands were created by a tectonic plate passing over hotspot.
- \_\_\_ 15. Subduction occurs when two continental plates converge.

**PART C** In the space provided, match each term or phrase with the best definition. (1 mark each)

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|--------------------------|---|
| ___ 1. Lithosphere       | A. A measurement that describes the amount of water vapour in the air.  |
| ___ 2. Albedo            | B. More dense air over water replaces less dense air over land.         |
| ___ 3. Humidity          | C. Often result when tectonic plates slide by each other.               |
| ___ 4. Radiation         | D. Gases in the atmosphere that trap and absorb radiation.              |
| ___ 5. Land breeze       | E. The transfer of thermal heat by direct contact of particles.         |
| ___ 6. Convection        | F. The amount of radiation reflected by a surface.                      |
| ___ 7. Sea breeze        | G. A transition zone between cold/deep and warm/surface ocean water.    |
| ___ 8. Subduction        | H. The action of one tectonic plate pushing below another.              |
| ___ 9. Conduction        | I. More dense air over land replaces less dense air over water.         |
| ___ 10. Troposphere      | J. Greatly increased in concentration since the Industrial Revolution.  |
| ___ 11. Greenhouse gases | K. The layer of the earth made up of the crust and upper mantle.        |
| ___ 12. Carbon dioxide   | L. Comes from livestock and decomposing garbage.                        |
| ___ 13. Thermocline      | M. The transfer of thermal heat within a fluid.                         |
| ___ 14. Faults           | N. The layer of the atmosphere in which almost all weather takes place. |
| ___ 15. Methane          | O. The type of heat we receive from the Sun.                            |

**PART D** Each of the following questions requires a short answer.

1. Explain what the greenhouse effect is, the negative effects it is causing, and how humans are contributing to it. Provide an example. (4 marks)

2. Explain how ocean currents come about and provide at least one factor that contributes to their movement. (3 marks)
  
  
  
  
  
  
  
  
  
  
3. What is the hydrosphere and where is it mostly located? (2 marks)
  
  
  
  
  
  
  
  
  
  
3. Provide two reasons that support the concept that the continents used to be joined together as a supercontinent. (2 marks)
  
  
  
  
  
  
  
  
  
  
5. What are the three major driving forces of tectonic plate movement? (1 mark)
  
  
  
  
  
  
  
  
  
  
6. Provide an example of each type of heat transfer. (1 mark each)
  - a. Conduction
  
  
  
  
  
  
  
  
  
  
  - b. Convection
  
  
  
  
  
  
  
  
  
  
  - c. Radiation